

ABSTRACT OF THE DISCLOSURE

The present invention provides a data processing apparatus and method for controlling access to a memory in the data processing apparatus. The apparatus
5 comprises a processor operable in a plurality of modes and a plurality of domains, said plurality of domains comprising a secure domain and a non-secure domain, said plurality of modes including at least one non-secure mode being a mode in the non-secure domain and at least one secure mode being a mode in the secure domain. The processor is operable such that when executing a program in a secure mode the
10 program has access to secure data which is not accessible when the processor is operating in a non-secure mode. A memory is operable to store data required by the processor and comprises secure memory for storing secure data and non-secure memory for storing non-secure data, the processor being operable to issue a memory access request when access to an item of data in the memory is required. At least one
15 memory management unit is provided which is operable, upon receipt of the memory access request from the processor, to perform conversion of a virtual address specified by the memory access request to a physical address. A first set of tables is provided, each table in the first set containing a number of first descriptors, each first descriptor containing at least a virtual address portion and a corresponding intermediate address
20 portion, and a second set of tables is also provided, with each table in the second set containing a number of second descriptors, each second descriptor containing at least an intermediate address portion and a corresponding physical address portion. The second set of tables are managed by the processor when operating in a privileged mode which is not a non-secure mode, and hence remains secure. The at least one memory
25 management unit is then operable to cause predetermined tables in the first and second set to be referenced to enable the conversion of the virtual address specified by the memory access request to a physical address.